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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,785	01/04/2001	Pierre-Alain Darlet	11283/35	3238
30636	7590	08/25/2005	EXAMINER	
FAY KAPLUN & MARCIN, LLP 150 BROADWAY, SUITE 702 NEW YORK, NY 10038			KISS, ERIC B	
			ART UNIT	PAPER NUMBER
			2192	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,785

Applicant(s)

DARLET, PIERRE-ALAIN

Examiner

Eric B. Kiss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20041118, 20050525.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. The reply filed 25 May 2005 has been received and entered. Claims 1-60 are pending.

Response to Amendment

2. Applicant's amendments to claims 36 and 37 do not appropriately address the rejection of these claims under 35 U.S.C. §101, as maintained below.

Response to Arguments

3. Applicant's arguments with respect to claim 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 36 and 37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 36 and 37 recite non-functional software components, *i.e.*, data, merely arranged on a tangible medium to render them machine-readable. The prescribed software elements fail to functionally transform physical subject matter into a different state or thing or otherwise cause a computer to produce any concrete, tangible, and useful result. When nonfunctional descriptive

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material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement.

6. To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. §101 (non-statutory) above are further rejected as set forth below in anticipation of Applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-41 and 43-60 are rejected under 35 U.S.C. 102(b) as being anticipated by John Levine, "Linkers and Loaders, chapter 6," June 1999 [online] accessed 08/15/2005, Retrieved from Internet <URL: <http://www.iecc.com/linker/linker06.txt>>, 9 pages (hereinafter *Levine*).

As per claim 1, *Levine* discloses receiving a software module, the software module including references to locations within the software module, at least some of the references being backward references; and reordering components of the software module to remove at least some of the backward references (see "Creating libraries" on pp. 5-6, and in particular, the

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discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claim 2, *Levine* further discloses adjusting at least one of the references in the software module to reflect the reordering of the components of the software module, so that the at least one of the references remains a reference to the same component, by to the component's new, reordered location, the new, reordered location coming after the at least one reference in the software module (see "Creating libraries" on pp. 5-6 and "Library formats" on pp. 1-5).

As per claims 3 and 4, *Levine* further discloses the software module including a symbol table, the symbol table including no backward references after the reordering and adjusting steps (see "Creating libraries" on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references). Further, *Levine* discloses that under certain circumstances, *lorder* and *tsort* won't be able to come up with a total order for the files, resulting in backward references remaining (see "Exercises" on p. 8).

As per claims 5-8, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see "Library formats" on pp. 1-5). *Levine* further discloses the software module including a symbol table, the symbol table including no backward references after the reordering and adjusting steps (see "Creating libraries" on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references). Further, *Levine* discloses that under certain circumstances, *lorder* and *tsort* won't be

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able to come up with a total order for the files, resulting in backward references remaining (see “Exercises” on p. 8).

As per claim 9, *Levine* discloses a reorder module configured to receive a software module including references to locations within the software module, at least some of the references being backward references, the reorder module configured to reorder components of the software module and remove at least some of the backward references (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claims 10, *Levine* further discloses adjusting at least one of the references in the software module to reflect the reordering of the components of the software module, so that the at least one of the references remains a reference to the same component, by to the component’s new, reordered location, the new, reordered location coming after the at least one reference in the software module (see “Creating libraries” on pp. 5-6 and “Library formats” on pp. 1-5).

As per claims 11 and 12, *Levine* further discloses the software module including a symbol table, the symbol table including no backward references after the reordering and adjusting steps (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references). Further, *Levine* discloses that under certain circumstances, *lorder* and *tsort* won’t be able to come up with a total order for the files, resulting in backward references remaining (see “Exercises” on p. 8).

As per claims 13-15, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see “Library formats” on pp. 1-5). *Levine* further discloses the software module including a symbol table, the symbol table including no backward references after the reordering and adjusting steps (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using tsort and lorder to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references). Further, *Levine* discloses that under certain circumstances, lorder and tsort won’t be able to come up with a total order for the files, resulting in backward references remaining (see “Exercises” on p. 8).

As per claim 16, *Levine* discloses receiving a software module sequentially, the software module having at least one symbol reference; linking the software module onto a target memory space; and resolving the at least one symbol reference without storing the entire software module in local memory while the symbol reference is resolved (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using tsort and lorder to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claims 17-22, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see “Library formats” on pp. 1-5).

As per claim 23, *Levine* discloses a linker configured to sequentially receive a software module having at least one symbol reference, the linker configured to resolve the symbol

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reference, the linker configured to store less than the entire software module in local memory during the resolution of the at least one symbol reference (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claims 24-27, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see “Library formats” on pp. 1-5; see further, “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claims 28 and 29, *Levine* further discloses a system symbol table including a field indicative of a defining software module (see “Creating libraries” on pp. 5-6 and “Library formats” on pp. 1-5).

As per claims 30 and 31, *Levine* further discloses a software module list (see “Library formats” on pp. 1-5).

As per claims 32-34, *Levine* further discloses storing link status in a symbol table (see “Library formats” on pp. 1-5).

As per claim 35, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see “Library formats” on pp. 1-5).

As per claim 36, *Levine* discloses a symbol table, the symbol table including at least one backward reference; at least one component of the software module located before the symbol

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table in the software module; wherein none of the at least one components of the software module located before the symbol table include backward internal references (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references). Further, the use of a computer-readable medium (such as memory) is inherent (and necessary) in realizing the computer-implemented functionality described in *Levine*.

As per claim 37, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see “Library formats” on pp. 1-5).

As per claim 38, *Levine* disclose receiving a software module, the software module including references to locations within the software module, at least some of the references being backward references; and reordering the components of the software module to remove at least some of the backward references (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references). Further, the use of a computer-readable medium (such as memory) is inherent (and necessary) in realizing the computer-implemented functionality described in *Levine*.

As per claim 39, *Levine* discloses receiving a software module sequentially, the software module having at least one symbol reference; linking the software module onto a target memory space; and resolving the at least one symbol reference without storing the entire software module

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in local memory at one time (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using tsort and lorder to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references). Further, the use of a computer-readable medium (such as memory) is inherent (and necessary) in realizing the computer-implemented functionality described in *Levine*.

As per claims 40 and 41, *Levine* further discloses linking the reordered module after the reordering (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using tsort and lorder to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claims 43-46, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see “Library formats” on pp. 1-5).

As per claims 47-54, *Levine* further discloses the reference pointing to/into a section or module before and after reordering (see “Creating libraries” on pp. 5-6 and “Library formats” on pp. 1-5).

As per claim 55, *Levine* discloses receiving a software module, the software module including components arranged in a first order, a first one of the components including a reference to a location in a second one of the components, the second one of the components preceding the first one of the components in the first order; and arranging the components into a second order so that the second one of the components is subsequent to the first one of the

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components in the second order (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claims 56 and 57, *Levine* further discloses linking the reordered module after the reordering (see “Creating libraries” on pp. 5-6, and in particular, the discussion of using *tsort* and *lorder* to arrange object files within an archive library in proper dependency order to allow a single sequential linker pass to resolve all undefined references).

As per claim 58-60, *Levine* further discloses the use of relocatable ELF object files, which include sections grouped into segments (see “Library formats” on pp. 1-5).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Levine*, as applied to claim 1 above, and further in view of U.S. Patent No. 6,185,733 to Breslau et al.

As per claim 42, *Levine* discloses such a method but fails to expressly disclose transferring the reordered module to a different computer system and linking the module on the different computer system. However, *Breslau et al.* teaches the use of remote object libraries distributed prior to linking (see, for example, col. 4, lines 11-20). Therefore, it would have been

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obvious to one of ordinary skill in the computer art at the time the invention was made to such use of a different computer for linking. One would be motivated to do so, for example, to facilitate distributed software development efforts or reduce the physical storage requirements for object files (see, for example, col. 2, lines 4-25).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist: 571-272-2100.

EBK /EBK
August 19, 2005



TUAN DAM
SUPERVISORY PATENT EXAMINER